APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,625	09/04/2003	Frank Dawidowsky	282723US8X	7983

22859   7590   01/13/2010
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
FOUD, HICHAM B

ART UNIT	PAPER NUMBER
2467	

NOTIFICATION DATE	DELIVERY MODE
01/13/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>10 September 2009</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-13 and 15-17</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-13 and 15-17</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   The amendment filed on 09-10-2009 has been entered and considered.

Claims 1-13 and 15-17 are pending in this application.

Claim 14 is cancelled.

Claims 1-13 and 15-17 remain rejected as discussed below.

Claim Objections

2.   Claims 10-11 are objected to because of the following informalities:

In claim 10 line 9, the term "the request terminal" should be –the requesting

terminal--.

Claim 11 is objected because it depends on the objected claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-13 and 15-17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Gorsuch et al (US 6,388,999), hereinafter referred to as Gorsuch in

view of Lodha et al (US 2003/0223430), hereinafter referred to as Lodha and

Benveniste (US 2002/0163933).

For claim 1, Gorsuch discloses a method to allocate bandwidth, which method is implemented at a central controller of a network (see Figure 1 element 104), comprising: allocating, at the central controller, a predetermined amount of bandwidth to a certain connection requiring a certain quality of service (see column 6 lines 21-25; subscriber 101 is granted 20 of 64 channels to allow data rate of 160kbps), wherein an owner of the certain connection is a requesting terminal which is a terminal of the network (see Figure 1, subscriber 101 requesting the bandwidth through the reverse or backward communication channel); freeing, at the central controller, a certain amount of bandwidth (see Figure 1, base station and see column 6 lines 21-25; subscriber 101 is granted 20 of 64 channels: therefore freeing up 44 channels of the 64 channels), the freed bandwidth being a difference between the allocated predetermined amount of bandwidth and a needed amount of bandwidth (see Figure 1, base station and see column 6 lines 21-25; subscriber 101 is granted (needed) 20 of 64 channels: therefore freeing up 44 channels of the 64 channels), wherein the needed amount of bandwidth is determined at the requesting terminal and transmitted to the central controller (see column 8 lines 41-43; an urgency factor for each data source attempting to transmit on the reverse links 111 and see Figure 1; wherein the reverse link is from the subscriber unit to the base station; see col.6 lines 18-21; the channels are allocated only as needed. ...subscriber 101 is requesting...and see at least col. 7 lines 35-40; upon receipt of ... the relative need for each subscriber); and the requesting terminal transmits a new needed amount of bandwidth (see column 8 lines 41-43; an urgency factor for each data source attempting to transmit on the reverse links 111 and see

Figure 1; wherein the reverse link is from the subscriber unit to the base station; see

col.6 lines 18-21; the channels are <u>allocated only as needed</u>. …subscriber 101 is

<u>requesting</u>…and see at least col. 7 lines 35-40; upon <u>receipt</u> of … the relative <u>need</u> for

each subscriber).

     Gorsuch discloses all the subject matter with the exception of explicitly disclosing

wherein the predetermined amount of bandwidth is allocated based on fixed capacity

allocation and wherein the indicated needed amount of bandwidth does not exceed the

predetermined amount of bandwidth and when the owner indicates a new needed

amount of bandwidth greater than said indicated needed amount, immediately returning

as much of the freed bandwidth as required, so that the new needed amount of

bandwidth is available to the owner. However, Lodha discloses a method wherein the

predetermined amount of bandwidth is allocated based on fixed capacity allocation (see

Figure 4B, step 406 or Figure 4A, step 402; Allocate bandwidth) and wherein the

needed amount of bandwidth does not exceed the predetermined amount of bandwidth

(see Figure 4B step 406; the unused allocated bandwidth) and when the owner

indicates a new needed amount of bandwidth greater than said indicated needed

amount, immediately returning as much of the freed bandwidth as required, so that the

new needed amount of bandwidth is available to the owner (see Figure 4B step 408;

letting the second queue borrows the unused allocated bandwidth of the first queue (the

owner); therefore, borrowing the unused bandwidth and getting it back when needing it).

Thus, it would have been obvious to the one skill in the art at the time of the invention to

use the burrowing method of the queues of Lodha of the unused bandwidth into the

requesting terminals of method Gorsuch for the purpose of re-allocating unused

bandwidth and saving bandwidth.

      Gorsuch in view of Lodha discloses all the subject matter with the exception

wherein the network is an ad-hoc network. However, Benveniste discloses that an ad-

hoc network can be defined as the IEEE 801.11 wireless LAN network where the

stations communicate directly with each other (see [0033] lines 1-9). Thus, it would

have been obvious to the one skill in the art at the time of the invention to use the

method of Gorsuch in view of Lodha in an ad-hoc network for the purpose of having the

advantage of adding quickly new devices.

      For claim 2, Lodha discloses a method characterized by allocating some or all of

the freed bandwidth to another connection, the another connection being a connection

without a predetermined amount of allocated bandwidth (see Figure 4B step 408; letting

the second queue <u>borrows</u> the unused allocated bandwidth of the first queue (the

owner) and since the second queue (owner) borrows an amount of bandwidth and

returns the borrowed bandwidth when the borrower needs his bandwidth, it is clear that

the second owner has no QoS which means no predetermined amount of allocated

bandwidth). And, Benveniste discloses the ad-hoc network (see [0033] lines 1-9).

      For claim 3, Gorsuch discloses a method wherein the requesting terminal is

operated by reserving a predetermined amount of bandwidth for providing a certain

quality of service for the connection (see column 6 lines 21-25; subscriber 101 is

granted 20 of 64 channels to allow data rate of 160kbps) and the method further

comprises: determining, in the requesting terminal, a filling status of the transmit queue

which indicates how much sending data is in the transmit queue (see Figure 4 and
column 8 lines 20-21; L thresholds are an indication of how much data is currently
stored in the buffer), determining, in the requesting terminal, the needed amount of
bandwidth as bandwidth needed in a next transmission frame, the needed amount of
bandwidth depending on the filling status of the transmit queue and not exceeding the
predetermined amount of bandwidth (see column 7 lines 7-13; a channel assignor
monitors buffer usage to determine an urgency characteristic of each subscriber unit in
order to dynamically assign an optimum number of channel resources to be allocated to
each subscriber unit), and transmitting, from the requesting terminal, the needed
amount of bandwidth to the central controller (see column 8 lines 41-43; an urgency
factor for each data source attempting to transmit on the reverse links 111 and see
Figure 1; wherein the reverse link is from the subscriber unit to the base station; see
col.6 lines 18-21; the channels are allocated only as needed. …subscriber 101 is
requesting…and see at least col. 7 lines 35-40; upon receipt of … the relative need for
each subscriber).

     Claim 4 is rejected for same reasons as claim 1 and 3.

     Claim 5 is rejected for same reasons as claim 1.

     Claims 16 and 17 are rejected for same reasons as claim 2.

     For claims 6, 9, 11 and 12, Benveniste discloses that ETSI HIPERLAN/2 is the
European counterpart to the American 802.11a with QOS features (see [0017]). Thus it
would have been obvious to the ordinary skill in the art at the time of invention to modify
the network as taught by Gorsuch and Lodha to an ad hoc network operated according

to the ETSI HIPERLAN/2 standard for the purpose of the direct communication of the

terminals without a network controller or base station and using the ETSI HIPERLAN/2

standard so it can operate in Europe.

Claim 7 is rejected for same reasons as claim 1.

For claim 8, Gorsuch discloses a central controller characterized by a transmit

queue for buffering sending data (see Figure 4 and column 8 lines 20-21; L thresholds

are an indication of how much data is currently stored in the buffer), and a monitoring

means for monitoring the filling status of the transmit queue and indicating the needed

amount of bandwidth, which depends on the filling status of the transmit queue, to the

bandwidth freeing means or bandwidth re-allocations means (see column 7 lines 7-13; a

channel assignor monitors buffer usage to determine an urgency characteristic of each

subscriber unit in order to dynamically assign an optimum number of channel resources

to be allocated to each subscriber unit).

For claim 10, Gorsuch discloses a requesting terminal of a network having a

connection with other terminals of the network or with a central controller of the network

(see Figure 1; wherein the subscribers 101-103 are in connection with the base station

104), the connection requiring a certain quality of service and therefore a predetermined

allocated amount of bandwidth (see column 6 lines 21-25; subscriber 101 is granted 20

of 64 channels to allow data rate of 160kbps), the requesting terminal comprising: a

transmit queue for buffering sending data (see Figure 4 and column 8 lines 20-21; L

thresholds are an indication of how much data is currently stored in the buffer); a

monitoring means for monitoring a filling status of the transmit queue and sending out a

request signal to the central controller indicating a needed amount of bandwidth, which

depends on the filling status of the transmit queue (see column 7 lines 28-43; a channel

assignor monitors buffer usage to determine an urgency characteristic of each

subscriber unit in order to dynamically assign an optimum number of channel resources

to be allocated to each subscriber unit. The buffer reports (the claimed request signal)

may be piggybacked onto the regular transmission of data on the reverse link) and the

needed amount of bandwidth being determined at the requesting terminal (see column

8 lines 41-43; an urgency factor for each data source attempting to transmit on the

reverse links 111 and see Figure 1; wherein the reverse link is from the subscriber unit

to the base station; see col.6 lines 18-21; the channels are allocated only as needed.

…subscriber 101 is requesting…and see at least col. 7 lines 35-40; upon receipt of …

the relative need for each subscriber).

　　　Gorsuch discloses all the subject matter with the exception of explicitly showing

that the indicated needed amount of bandwidth does not exceed the predetermined

allocated amount of bandwidth and wherein the predetermined amount of bandwidth is

allocated based on fixed capacity allocation. However, Lodha discloses that the needed

amount of bandwidth does not exceed the predetermined allocated amount of

bandwidth (see Figure 4B step 406; the unused allocated bandwidth is the difference

between the allocated bandwidth and the needed amount) and wherein the

predetermined amount of bandwidth is allocated based on fixed capacity allocation (see

Figure 4B, step 406 or Figure 4A, step 402; Allocate bandwidth). Thus, it would have

been obvious to the one skill in the art at the time of the invention to use the burrowing

method of Lodha of the unused bandwidth into the method Gorsuch for the purpose of

re-allocating unused bandwidth.

Gorsuch in view of Lodha discloses all the subject matter with the exception

wherein the network is an ad-hoc network. However, Benveniste discloses that an ad-

hoc network can be defined as the IEEE 801.11 wireless LAN network where the

stations communicate directly with each other (see [0033] lines 1-9). Thus, it would

have been obvious to the one skill in the art at the time of the invention to use the

method of Gorsuch in view of Lodha in an ad-hoc network for the purpose of having the

advantage of adding quickly new devices.

For claim 13, Lodha discloses a method, wherein the allocated predetermined

amount of bandwidth corresponds to a fixed reserved amount of bandwidth (see Figure

4B, step 406 or Figure 4A, step 402; Allocate bandwidth).

For claim 15, Lodha discloses a method wherein the freed bandwidth is re-

allocated in a next transmission frame (see Figure 4B, step 408; the allocation of the

unused bandwidth is for the next transmission frame).

Response to Argument

4.   Applicant's arguments filed have been fully considered but they are not

persuasive.

5.   In regard to applicant's argument that Lodha fails to show "wherein said needed

amount of bandwidth is determined at the requesting terminal". The examiner disagrees

because: First of all, the claims are rejected under 103 for obviousness with a

combination of references, therefore arguing only one reference and not the

combination is improper. Thus, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Second of all, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Finally, applicant repeatedly argues that Gorsuch does not teach "wherein said needed amount of bandwidth is determined at the requesting terminal". Examiner respectfully disagrees; the feature of the limitation listed above is clearly met by Gorsuch. Gorsuch explicitly designates and teaches the argued limitation. Gorsuch does not choose to use his own lexicography to designate and teach the argued limitation. However, the steps performed by Gorsuch are the same regardless to the terminology used. Gorsuch clearly teaches wherein the needed amount of bandwidth is determined at the requesting terminal and transmitted to the central controller (see column 8 lines 41-43; an urgency factor for each data source attempting to transmit on the reverse links 111 and see Figure 1; wherein the reverse link is from the subscriber unit to the base station; see col.6 lines 18-21; the channels are allocated only as needed. ...subscriber 101 is requesting...and see at least col. 7 lines 35-40; upon receipt of ... the relative need for each subscriber).

Moreover, column 7 lines 28-43 shows a channel assignor which monitors buffer usage

to determine an urgency characteristic of each subscriber unit in order to dynamically

assign an optimum number of channel resources to be allocated to each subscriber

unit. The buffer reports (the claimed request) may be piggybacked onto the regular

transmission of data on the reverse link. Therefore, Gorsuch teaches the argued

limitation.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. See PTO-892.

7.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

8.   **Examiner's Note**: Examiner has cited particular columns and line numbers in the

references applied to the claims above for the convenience of the applicant. Although

the specified citations are representative of the teachings of the art and are applied to

specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

When responding to this office action, applicants are advised to clearly point out the patentable novelty which they think the claims present in view of the state of the art disclosed by the references cited or the objections made. Applicants must also show how the amendments avoid such references or objections. See 37C.F.R 1.111(c). In addition, applicants are advised to provide the examiner with the line numbers and pages numbers in the application and/or references cited to assist examiner in locating the appropriate paragraphs.

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to HICHAM B. FOUD whose telephone number is (571)270-1463. The examiner can normally be reached on Monday - Friday 10-6 EST.
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pankaj, Kumar can be reached on 571-272-3011. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hicham B Foud/
Examiner, Art Unit 2467
01/02/2010

/Hong Cho/
Primary Examiner, Art Unit 2467